The Ballarat Naturalist

June 2004

Snow Gum

From Ecuador to Iguaçu

Speaker: Helen Burgess

In April-May 2003 club members Helen Burgess and Avis Barlow participated in a tour to South America. A trip down the Amazon River was the main motivation for the expedition but they took the opportunity to also see bird-life in Ecuador and the Iguaçu Falls.

The **Tandayapa Bird Lodge in Ecuador** was the first port of call. The local area (within two hours' drive) boasts 600 bird species with more than 30 species of humming birds visiting the specially provided feeders near balconies of the living quarters. In the slides that Helen showed of the hummingbirds we were able to see that the wings were flapping at a great rate – up to 80 times per second we were told.

The **Amazon River Expedition** was the next stage of the tour. Helen commented on places and events she and Avis experienced along the way and showed beautiful slides that illustrated her verbal descriptions. In fact, because she moved through the many slides so smoothly, I personally felt I was seeing a movie show. Avis added to the talk with extra anecdotes every now and then.

As Helen described the day-to-day experiences she included many facts about the River and its surrounds. The Spaniards named the Amazon after female warriors in Greek mythology. The first explorer, to traverse the length, Francisco de Orellana was attacked by tall, robust and naked female warriors, who were then named Amazons. The Amazon rain forest is six million square kilometres and hence the world's largest tropical forest and the planet's most diverse biological ecosystem. It contains 30% of the world's remaining forest covering 42% of Brazilian land. Before the Andes were uplifted, 100 million years ago the river flowed east. Now the river, which originates in the mountains of Peru, has its basin covering parts of eight countries. It flows 6000 km east and with a final width of 300 km the Amazon enters the

Atlantic Ocean near Belem. It has 1100 tributaries and, budding explorers please note; some of these are unexplored! The Amazon's depth ranges from 12 to 90 metres. The Amazon carries 20% of the freshwater that discharges into the world's oceans. Tropical rains produce this water with the highest rainfall being 20 metres per year on an average of 250 days, with humidity always above 80% and daily temperatures ranging from 22° to 31°C.

Water In the river the water is far from pure with three main types – black, white and clear. The *black* water is acidic and has the colour of strong tea because it has leached the tannin from the decaying vegetation of the river Rio Negro before it entered the Amazon near Manaus. The white water is chemically neutral and actually muddy brown in colour as it carries silts and sediments rich in nutrients. The clear water carries little sediment and is also neutral.

Plants Helen described and showed slides of some of the plants, birds and animals that made an impression on her. These included orchids and bromeliads which can trap 10 litres of water. The amazing plant, *Victoria amazonica* has rhizomes 20 cm in diameter, leaves 180 cm across and flowers which open for one day on one plant each with about 60 petals, white in early morning and with magenta colouring by afternoon. The veining of the leaves was used in the design of the structure of the Crystal Palace for the Great Exhibition in 1851. Also mentioned was the cannon-ball-like fruit of the Brazil nut with twenty nuts enclosed. The heavy fruit falls from a canopy tree 50 metres tall, whereas the *Theobroma cacao* from which cocoa is produced is an under-storey tree of 5 metres. Each tree produces about 70 large pods containing 20 or more cocoa beans. The sap of the rubber tree at one stage produced 40% of Brazil's export industry. Seeds were shipped to Kew Gardens by Henry Wickham, then propagated and later shipped to Ceylon. Large plantations developed throughout SE Asia thus devastating the industry in Brazil. Hence Wickham was known as the "Executioner of Amazonas".

Also there were stories and slides of some birds, reptiles and mammals such as the sloth, armadillos and dolphin and a special mention made of the fish, piranha, which was a quest of Avis's. The ants and spiders are 30% of the animal biomass so had to rate a mention. Leaf-cutting ants can defoliate a small tree in a day by slicing leaves and carrying them underground where, once decomposed, they are the ants' sole diet.

The last port of call was the **Iguaçu Falls** on the border of **Brazil and Argentina**. These falls were formed 150 million years ago. The reserve consists of 185 000 hectares which is the last 5% forest reserves of the area. Originally the National Park was 1000 hectares and it took the lobbying of the Governor by a prominent inventor of the airplane to preserve the remaining park area. Only a small percentage of this is open to the public. The Falls are 2.7 km wide and so the widest in the world. They consist of 275 separate falls with many drops. The height of the Falls is 65 m. The average

volume of water over the falls is 10 million litres per second with a rate of flow of 1500 cubic metres per second. These figures enable the flow to be utilised for a Hydroelectric Project. Helen showed us a number of spectacular slides of the falls from many directions. It appeared that she was a little more adventurous than Avis as she braved the raging rapids and demonstrated that she experienced the falling water of Devil's Throat at close range. Avis can vouch for it as, on returning Helen looked like a "drowned rat".

Not everything described by Helen can be mentioned here. She did spend considerable time talking about the Europeans and their coming on the Amazon River with their Western civilisation, including such things as the building of cities with amazing opera houses. But as Helen bemoaned, with these changes inevitably came, in various forms, exploitation and devastation of the environment which could be the subject of a talk in itself.

Fran Hanrahan.

Excursion: Mt. Macedon Area

Leader: John Gregurke

This excursion, a little beyond the Club's normal range, provided members with the opportunity to explore different terrain containing a variety of natural phenomena and historic interest.

From a rendezvous in Gisborne the party proceeded to the Conglomerate Gully Flora Reserve west of Riddell's Creek for the morning session. The 85 ha reserve was given to the Shire of Romsey in 1983 by the McCutcheon family and is now managed by the Department of Sustainability and Environment.

Older than the Macedon Range, the geology of the gully creates great interest. It is believed that the conglomerate rocks (Kerrie Conglomerate) were deposited by a series of shallow rapid streams over sediments of the Upper Ordovician period (440 million years ago). They contain rock and pebble of varying sizes in a finely grained sandy matrix, some 370 million years old. The gully, with its spectacular exposures of the rocks, is dated from the early Cretaceous period (145m.y.a.)

The dry sclerophyll forest here is predominantly Messmate with some Broadleaved Peppermint and Candlebark, and Black Wattle, Hedge Wattle and Hop Wattle in the understorey. Recent rain had freshened the bush and there was evidence of movement in the plant life. New fronds were appearing on parched and shrivelled Rock Ferns, leaves were well advanced on Tall Greenhoods, Cranberry Heath was flowering and Chestnut Polypore fungus was conspicuous. Eleven bird species were listed

ranging from Whistling Kite, White-winged Chough, to Spotted Pardalote and Scarlet Robin. Crusader Bug and a well preserved nest of Grey Shrike-thrush (from last nesting season) within the shell of a burnt-out tree stump provided added interest.

En route to Macedon Regional Park a halt was called to examine the fine 1860s vaulted basalt railway bridge spanning Riddell's Creek. Here in the creek were flowering plants of Cape Pond Lily or Cape Water-hawthorn *Aponogeton distachyos*. This attractive, sweetly fragrant water plant has a showy inflorescence with alternate segments of creamy white with purplish black anthers. In *Aquatic Plants of Australia*, Helen Aston records that it was introduced in South Australia from South Africa and first reported in Victoria as 'now spontaneous in Ballarat' in 1887. Has any member sighted this plant in the Ballarat area in recent times?

The ascent of the Macedon Range revealed the differing vegetation zones (there are five) caused by varying soil types and altitudes. The geology of the Range is the result of volcanic eruptions in the Upper Devonian period (370m.y.a.) then later intrusions of granite. Following periods of major erosion came other volcanic eruptions (6m.y.a.) creating landforms such as the eroded mamelon named the Camel's Hump.

The lunch stop was at Day's Picnic Ground, followed by a walk to Sanatorium Lake. The forest type on this elevation is wet sclerophyll containing stately Alpine Ash, Messmate and Mountain Ash. The understorey was dense and consisted of a range of trees, shrubs and groundstorey plants. A cross-section varies from Blackwood, Blanket-leaf, Mountain Pepper, to Mother Shield Fern in the damp areas. The forest was very quiet with very little bird movement. Perhaps the temperature of 7° and falling (as revealed by President Peter's pocket thermometer) was a contributing factor.

The final stop was made on the summit of Mt. Macedon within the Snow Gum woodland dominated by Alpine Snow Gum. Cloud and failing light hampered views from the Memorial Cross Reserve but the well presented interpretive displays provided much of historical interest for members to study before wending their various ways homeward.

Parks Victoria has produced useful education programme sheets on fauna and vegetation, and visitors' guide sheets on the 30km of walking tracks in and around the regional park. See also their www.parkweb.vic.gov.au website.

This proved to be an enjoyable and interesting excursion, testimony to John's leadership and research.

Greg Binns.

May Meeting Points

- 34 members and visitors were welcomed.
- Library: Members asked to return survey lists to Fran Hanrahan. Discussion generally favoured that a library of relevant books be retained. Steps need to be taken to increase members' awareness of the books available and encourage the use of the library. Some suggestions were taking books on excursions, displaying books at meetings, reduce the size of the library by culling irrelevant books, providing better storage so that books are more accessible and having a time set aside for library borrowing during meetings. A working bee is planned for the morning of Sunday 4 July.
- Lake Burrumbeet Advisory Committee: Greg Binns and John Gregurke reported on the meeting held on 5 April. The Lake went dry in mid-March revealing the shallow saucer shape. Information will be included in the Ballarat Naturalist. Work being done around the lake includes fencing of Red Gum west of Russell Reserve Caravan Park, car park area at Russell Reserve, removal of pines near Burrumbeet Caravan Park, fencing of foreshore on south-east corner.
- Ballarat Biodiversity Enhancement Project Launch: Senator Kay Patterson at Gong Gong Reservoir launched the project on 6 May. A Green Corp team will work for 6 months on local conservation projects under the supervision of Greening Australian and BEN.

Field Reports

- Elizabeth Fitzpatrick: Two Wedge-tailed Eagles seen along Cuthberts Road.
- John Gregurke: At Lake Burrumbeet several hundred Grey Teal and Australian Shelduck; 300 Pelicans remained when lake went dry.
- Tony Johns: Dotterels, Black Kite, Spiny-cheeked Honeyeater and owls along the Murray River at Colignan.
- Claire Dalman: Green Hill Lake at Ararat has low water but many birds including spoonbills.
- Heather Dalman: Pair of Brolga on Lake Goldsmith Road.
- Pat Murphy: Water in Newlyn Reservoir has Pelican, grebe, spoonbill, herons, ibis and ducks.
- Greg Binns: Common Heath flowering around Ballarat.
- John Mildren: Flock of Cattle Egrets at Mt Helen. Kangaroo in driveway. Fly Agaric fungi emerging in pine forest.
- Paul Norquay: A European wasp, so heavy after feeding on grapes, that it fell to the ground unable to fly.
- Ken Hammond: Eastern Rosella in Wendouree. Grey Butcherbird at Lake Wendouree.
- Kay Preston: 24 Pelicans on Lake Wendouree early May.

Club Campout—Apollo Bay July 16-18

What Once again we are spending a weekend at the Star of the Sea Convent, located at

Why Opportunities abound for beachcombing, birdwatching, rockpool inspections and rainforest walks.

Bring Your own bedlinen, towels and food. Most bedrooms have two single beds with pillows and doonas, and a washbasin. The kitchen is well equipped with hotplates, oven and microwave, fridges and freezer, crockery and cutlery.
Dining room and lounge have gas heating and are very cosy. TV and video facilities are provided.

Cost $15 per person per night. Claire Dalman or John Gregurke can give you further details.

Booking

Please give your name to John Gregurke if you intend to go. A minimum of 14 people is needed , otherwise the cost per person will be higher.

Further Observations on Lake Burrumbeet

Extract from the minutes of the Lake Burrumbeet Advisory Committee held on Monday 5th April 2004.

"As with Lake Learmonth, Lake Burrumbeet emitted an unpleasant smell from the silty bed as water receded off it. This smell persisted for a short time after all water had disappeared.

As expected, when the lake got to very shallow depths, strong winds pushed the whole body of water off considerable areas of the bed and back onto previously dried areas on the opposite side. This movement of water back onto dry areas accelerated the final drying out of the lake. Some of this water is retained in minor depressions and cracks in the bed and does not flow back to the main body of water when the wind direction reverses. It then evaporates before a further wind change blows another batch onto the area. In the last 7 weeks leading up to when the lake was fully dry on 20th March 2004, an estimated additional 70% above the expected evaporation rate was lost by this phenomenon

Immediately after drying out, much of the bed was covered in a very white (thin) layer of salt. This spectacular sight only lasted until 29th March when rain puddled the salt

into the muddy silt. While sandy beaches up to several hundred metres wide in places have been revealed, it needs to be recorded that the rest of the bed of the lake is bot sandy and consists of a soft muddy clayey superfine silt.

Two weeks after the water disappeared, pelicans are still pulling eels out of the silt.

The flow of water from the North Ballarat sewerage treatment plant reaching the lake since this long dry period commenced on 5th October 1996 delayed the drying out of the lake by approximately 12 months.

The lake would just fill in 19 months from (by late spring) with 800mm of rain each year in autumn, winter and spring over the lake and if roughly the same amount fell in the Burrumbeet Creek catchment in concentrated falls to produce a very high in-flow of 25,000 megalitres in each year."

Greg Binns and John Gregurke represented the Club at this meeting and reported on the birds to be found on the lake (see Field Reports in our newsletters) and drew the committee's attention to the importance of protecting the lake edges from foxes and grazing.

And.....

Members have also been attending other functions of relevance to our club's stated aims and objectives: **Les Hanrahan** attended an FNCV fungi excursion recently and is going to a Cryptogammic Extravaganza at Hall's Gap soon; **John Gregurke** went to the launch of the GreenCorp team at the Gong reservoir (see Meeting Points), attended a public meeting regarding the development and management of Victoria Park (hence our inspection on June 7th) and went to a lecture at Ballarat Uni. on fox management in National Parks. **Carol Hall** went on a research expedition run by WA's Department of Conservation and Land Management to Cape Arid National Park east of Esperance where the 20-strong team of 12 volunteers and 8 professionals carried out flora and fauna surveys. **Claire and Peter Dalman** are going to the BEN Biodiversity Forum in June.

Let us know if you have participated in events of this nature—we'd love to hear about them.

Has your address changed?
Please inform the Treasurer so that our records remain up to date.

Calendar

June

Fri. 4	**Meeting:** Members' Presentations—*Namibia/Weeds/ UK Bird Reserves.*
Sun. 6	**Excursion:** *Fungi* with Les Hanrahan - Barkstead to Blakeville.
Mon. 7	Inspection of Victoria Park—meet 9.30am at Gillies/Sturt entrance.
Tues. 22	Committee Meeting @ Carol's, 7.30pm.

July

Fri. 2	**Meeting**: David Clark—*Australia's Unique Landscape.*
Sun. 4	am Committee to reorganise FNCB library 9.30am
	pm **Excursion** to the *Australiana Room, Ballarat Library* with Edith Fry. Historic publications relating to national and local flora and fauna.
Fri 16-Sun 18	Club Campout, Apollo Bay.

Supper Duty: **June:** Volunteers needed
July: Tony Johns

Committee

President ..... Mr. Peter Dalman
Vice-President..... Mrs. Carol Hall
Secretary..... Mr. John Gregurke
Treasurer..... Mr. Bob Curtain

Mr. Greg Binns .....
Miss Helen Burgess.....
Miss Maureen Christie.....
Mrs. Claire Dalman.....

Mrs. Carol Hall (Editor).....
Miss Fran Hanrahan.....
Mr. Les Hanrahan.....

Correspondence: PO. Box 328W, Ballarat West, 3350.

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Editor:

Website: www.ballarat.yourguide.com.au Click on *Local Info.* Search *Environment.*

Meetings are held at the Ballarat Horticultural Centre, cnr. Gregory & Gillies Sts (VicRoads 254 F8) on the first Friday of the month at 7.30pm.

Excursions: Depart from Ballarat Market Place (formerly Creswick Plaza) Creswick Rd., Ballarat (VicRoads 255 M10) at 9.30 am unless otherwise specified.

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